3Com® NBX® 100 IP Telephony Solution R5.0

DATA SHEET

- Fifth-generation IP telephony system with proven high-fidelity audio and system reliability
- Secure, converged solution eliminates cost and administrative overhead of separate voice and data networks
- IP phone portfolio meets a range of performance and budget requirements
- Advanced built-in applications include automated attendant, voice mail, automatic call distribution, and graphical call detail recording
- Easily integrated, productivity-enhancing application options include IP Messaging, eXchange Call Center, ExecutiveAssistant, and Education Module

Key Benefits

Increased Productivity

With the 3Com® NBX® 100 IP Telephony Solution, small to medium size organizations can increase efficiency, enhance collaboration and improve customer interactions. Advanced applications and intuitive, browser-based management can optimize services and minimize the need for additional personnel.

The NBX platform offers built-in, productivity enhancing tools such as voice mail, automatic call distribution (ACD), computer telephony integration (CTI) via TAPI, visual voicemail/e-mail clients (IMAP4), desktop administration, and call detail reporting (CDR) applications.

R5.0 enhancements include:

- Four new IP phones
- Built-in ACD
- Forced and verified account codes
- Personal operator service
- Silent monitor/whisper/barge-in functionality

Easy Deployment

Standards-based design, including support for switched IEEE 802.3af Power over Ethernet (PoE), facilitates seamless integration with existing network infrastructure and provides the investment assurance of cost-effective system evolution. Open Applications Protocol Interface (API) architecture provides access to best-in-class third-party applications.

Practical Scalability

Organizations can boost capacity and enhance applications via software upgrades, without the need for expensive hardware acquisitions. Cost-saving incremental licensing provides scalability up to 200 devices (lines/stations; maximum 100 PSTN lines) and up to eight NBX IP Virtual Tie Lines (VTLs).

Reduced Operation Costs

A single voice and data network gives organizations the advantages of a converged infrastructure. Streamlined deployment and management optimize existing IT resources. Easy moves-adds-changes can significantly lower total cost of ownership.

Reduced Communications Costs

VoIP telephony enables dramatic cost reduction of long distance calling expenses—unified multisite dialing plans and hop-on/hop-off toll-bypass across wide area networks (WANs) can deliver immediate savings. Multisite message exchange options between 3Com and third-party Voice Profile for Internet Mail (VPIM)-compliant voicemail systems offer multisite organizations the economy of interoperable systems.

Budget-Matching IP Phone Choices

IP phones with robust feature-sets let organizations optimize their investments in communications infrastructure. Choices include 10/100/1000 Mbps Ethernet/IP phones, softphones, and receptionist consoles that support SIP or NBX call control and PoE for deployment flexibility.

Broad Range of Advanced Applications

For improving business activities, 3Com NBX systems support numerous standards-based applications, including advanced ACD capabilities with 3Com eXchange Call Center software, enhanced desktop productivity with 3Com ExecutiveAssistant call recording and find me/follow me services, and reuse of Nortel handsets with the 3Com Legacy Link solution. Additionally, the 3Com Voice Solution Providers Program delivers third-party offerings tested for compatibility and integration with 3Com voice solutions.

Specifications

System Requirements
100BASE-TX or switched Ethernet LAN
3Com NBX 100 call processor and chassis
Min. two 3Com IP phones
Min. one PSTN interface card if connecting to PSTN

System Capacity
Supports up to 200 devices (lines/stations), including up to 100 PSTN Central Office lines and eight Virtual Tie Lines

PSTN Gateway Options
Loop-start analog, T1/PRI, E1/PRI, ISDN BRI-ST, Q.SIG/PRI

Port Connections
WAN: via external router with IP-ToS support
LAN: Single 10 MB uplink ports on the call processor
Diagnostic: Serial port

Analog Devices
Supports 2500 series-compatible analog devices, including cordless phones, fax machines, night bells, and door ringers

Network, Prioritization, and Audio Compression Standards
H.323, G.711, G.729a/b, ADPCM, 802.1d, 802.1p, 802.1q, 802.2, 802.3, 802.3af, 802.11, IP, IP-ToS, DiffServ, TCP/IP, UDP/IP, DHCP, DNS

Application Standards
TAPI 2.1, TAPI/WAV, IMAP4, HTTP, H.323, SMTP/MIME, VPIM

Management
Built-in 3Com NBX NetSet™ utility; 3Com Network Supervisor support

NBX Voicemail Languages/Dialects
Chinese (Cantonese), Chinese (Mandarin), English (Australian), English (UK), English (US), French (Parisian), German, Hebrew, Italian, Spanish (Castilian), Spanish (Mexican), Russian

Power Requirements
Call Processor: 85-264 VAC, 47-63 Hz, 3 A
Chassis: 85-264 VAC, 47-63 Hz, 2.5 A

Power Dissipation
Call Processor: 150 W
Chassis: 130 W
Phone: 5 W (maximum)

Chassis/Call Processor Dimensions and Weight
Height: 29.21 cm (11.5 in)
Width: 50.8 cm (20 in)
Depth: 43.18 cm (17 in)
Weight: chassis and packaging—10.35 kg (23 lb); call processor and packaging—13.5 kg (30 lb)

Environmental Ranges
Operating temperature: 0° to 40°C (32° to 104°F)
Storage temperature: -40° to +70°C (- 40° to +158°F)
Humidity: 5% to 85% noncondensing

Network Access Standards
National Requirements FCC Part 68, Canada CS03
CTR4/A1 (Commission Decision 98/520/EC)

Safety
UL/CUL 1950 3rd Edition
IEC 60950: 1991 + A1, A2, A3, A4; National deviations for Europe and Australia

Emissions
FCC Part 15 Class A and B
EN 55022:1994/A1, 1995/A2, 1997 Class A
VCCI Class A
AS/NZS 3548:1995 Class A

Immunity
EN 55024:1998

Ordering Information

PRODUCT DESCRIPTION	3COM SKU
NBX 100 Call Processor One NBX 100 call processor required per system; supports 200 NBX devices and 12 NBX voicemail languages; manages all call traffic; provides embedded application hosting, external application gateway connectivity, telephony adjunct connectors for Music on Hold (1/8" RCA) and Paging (RJ-11), one 10BASE-T MIDI uplink port, and one system hard disk.	3C10110D
NBX 100 Chassis Offers six universal card slots; base capacity includes NBX Voice Mail license for four automated attendant/voicemail (AA/VM) ports, 30 minutes message storage, IP On-the-Fly License, one switchable 110/220 V 50/60 Hz AC power supply, a 2.43 m/8 ft U.S. power cord, 48.26 cm/19" rack/wall mounting ears, and one trial port of NBX ConneXtions, NBX pcXset™ softphone, IP On-the-Fly License, and NBX Media Driver. Compatible with NBX V3000 and V5000 systems.	3C10211C-XX
NBX Uplink Card Includes eight RJ-45 uplink ports (10 Mbps shared Ethernet) to add an NBX chassis or to support other NBX devices.	3C10370
NBX Analog Line Card (FXO) Terminates up to four Loop-start PSTN telephone lines to the NBX system via four RJ-11 interfaces; includes built-in caller ID support (service must be purchased from a telco/PTT) and built-in power failure transfer jack. Requires R4.1 or higher system software.	3C10114C
NBX Analog Terminal Card (FXS) Terminates up to four tip/ring analog devices such as an analog phone, cordless phone, Group 3 fax machine, speakerphone adjunct, etc. Does not support modems. Requires R4.1 or higher system software.	3C10117C
NBX Analog Adapter (FXS) Standalone device converts an Ethernet connection into an analog station port (FXS) for industry standard analog phones or similar devices; provides a switched 10/100 Ethernet port for another device such as a PC; supports IEEE 802.3af Power over Ethernet (PoE); does not support modems; local power supply included. Requires NBX R4.2 or higher system software.	3C10400-XX
NBX T1/PRI Card Terminates a voice T1, T1/PRI, or Q.Sig slave circuit into the NBX system; for optimized network loading includes a 10/100 MB MDI uplink port to connect to a LAN switch port, plus a built-in CSU. Requires R4.3 or higher system software.	3C10116D
NBX BRI-ST Card Terminates up to eight ISDN BRI-ST lines into the NBX system. Requires R2.6 or higher system software.	3C10164C-ST
NBX E1/PRI Card Terminates a voice E1/PRI or PRI/Q.Sig slave circuit into the NBX system; for optimized network loading includes a 10/100 MB MDI uplink port to connect to a LAN switch port, plus a built-in CSU. Requires R4.3 or higher system software.	3C10165D
NBX 100 Voice Mail Upgrade Licenses The NBX 100 Chassis includes 30 minutes of voicemail (VM) storage and four automated attendant (AA) ports; options offer price/capacity choices that ensure growth is efficient and economical; each requires a keycode to activate.	
From VM storage/AA ports — To VM storage/AA ports	
30 minutes/4 ports — 4 hours/4 ports	3C10137
30 minutes/4 ports — 20 hours/6 ports	3C10134
30 minutes/4 ports — 80 hours/12 ports	3C10135
4 hours/4 ports — 20 hours/6 ports	3C10138
4 hours/4 ports — 80 hours/12 ports	3C10139
20 hours/6 ports — 80 hours/12 ports	3C10136

Ordering Information *(continued)*

PRODUCT DESCRIPTION	3COM SKU
3Com 3100 Entry Phone Provides a single-line IP entry phone for basic telephone services via analog feature code access and one 10/100 Ethernet port (no PC port); supports 802.3af PoE standard; includes preprogrammed services for volume up/down, buttons for FWD Mail and Mail Retrieve, large LED for messages waiting; local power supply sold separately (see 3C10224-XX or 3C10444-XX). Requires NBX R5.0 system software and an NBX Group 0 device license (3C10410), sold separately.	3C10399A
3Com 3101 Basic Phone Provides listen-only speaker, a two-line pixel display with three softkeys, a four-way cursor controller, four programmable buttons, and two 10/100 switched Ethernet ports; supports 802.3af PoE standard; local power supply sold separately (see 3C10224-XX or 3C10444-XX). Requires NBX R4.3 or higher system software and an NBX Group 1 device license (3C10411), sold separately.	3C10401A
3Com 3101SP Basic Phone with Speaker Provides half-duplex speakerphone, a two-line pixel display with three softkeys, a four-way cursor controller, four programmable buttons, and two 10/100 switched Ethernet ports; supports 802.3af PoE standard; local power supply sold separately (see 3C10224-XX or 3C10444-XX). Requires NBX R4.3 or higher system software and an NBX Group 1 device license (3C10411), sold separately.	3C10401SPKRA
3Com 3102 Business Phone Provides full-duplex speakerphone, a two-line pixel display with three softkeys, a four-way cursor controller, 18 programmable buttons with lights, 10 fixed-feature buttons, removable language-specific faceplate for additional communications flexibility, and two 10/100 switched Ethernet ports; supports 802.3af PoE standard; local power supply sold separately (see 3C10224-XX or 3C10444-XX). Requires NBX R4.2 or higher system software and an NBX Group 2 device license (3C10412), sold separately. .	3C10402A
3Com 3103 Manager Phone Provides a full-featured IP manager phone with large user-friendly menu-driven UI, high-quality full-duplex speakerphone, large pixel display with 12 system appearances and 10 display softkeys, a four-way cursor controller, 10 fixed-feature buttons, eight feature buttons w/ LEDs, and two 10/100/1000 switched Ethernet ports; supports 802.3af PoE standard; local power supply sold separately (see 3C10224-XX or 3C10444-XX). Requires NBX R5.0 system software and an NBX Group 2 device license (3C10412), sold separately	3C10403A
3Com 3105 Attendant Console Provides up to 100 programmable functions via 50 buttons with high/low shift position, four pre-programmed buttons, and one 10/100 Ethernet port; supports 802.3af PoE standard; local power supply sold separately (see 3C10224-XX or 3C10444-XX). Requires NBX R4.3 or higher system software and an NBX Group 2 device license (3C10412), sold separately.	3C10405A
3Com 3106C Cordless Phone Provides a 900 MHz IP cordless phone for in-building mobility with roaming up to 1,000 feet from the base station under supported operating guidelines, six hours talk time, four days standby, a two-line pixel display, four programmable buttons, and eight preprogrammed buttons; up to ten 3106C devices can operate in a domain radius; base station requires local power (power supply included). Requires NBX R5.0 system software and an NBX Group 1 device license (3C10411), sold separately.	3C10406A
3Com 3107C Cordless Phone Provides a 900 MHz IP cordless phone for in-building mobility with roaming up to 1,000 feet from the base station under supported operating guidelines, six hours talk time, four days standby, a two-line pixel display, four programmable buttons, nine preprogrammed buttons; up to three 3107C devices can operate in a domain radius; base station requires local power (power supply included). Requires NBX R5.0 system software and an NBX Group 1 device license (3C10411), sold separately.	3C10407A
NBX Group 0 Phone License Permits connection of a 3Com 3100 phone to an NBX system; one license per phone required for operation; may be ordered in any quantity; not required for NBX 1100 and 2100 series phones. Requires R5.0 system software. One-port license (unit-based).	3C10410
NBX Group 1 Phone License Permits connection of a 3Com 3101, 3101SP, 3106C, or 3107C phone to an NBX system; one license per phone required for operation; may be ordered in any quantity; not required for NBX 1100 and 2100 series phones. Requires R4.3 or higher system software. One-port license (unit-based).	3C10411
NBX Group 2 Phone License Permits connection of a 3Com 3103 Manager Phone, 3102 Business Phone, and 3105 Attendant Console to an NBX system; one license per phone required for operation; may be ordered in any quantity; not required for NBX 1100 and 2100 series phones. Requires R4.3 or higher system software. One-port license (unit-based).	3C10412
NBX IP On-the-Fly Site License Allows local and remote NBX devices to operate as IP phones at Layer 3 on a per-call basis with each LAN-based device returning its IP address to the "pool" on the NCP after call completion; License included with NBX 100/NBX V3000/NBX V5000 purchases after 26Jan04.	3C10132
NBX IP Serve Site License Allows local and remote supported NBX devices to operate as IP phones at Layer 3 via static or DHCP IP addressing; one IP address needed per MAC address (each device and CO port) in the system. Requires R4.2 or higher system software.	3C10131
NBX ConneXtions Gateway License Software-based H.323 gateway license supports one concurrent VoIP H.323 session added to existing installed session; uses a dedicated Windows NT/2000 workstation or server (PC HW and OS license not included); NBX 100 supports up to 16 sessions. Requires R4.1 or higher system software. One-port license (unit-based).	3C10315
NBX IP Virtual Tie Line License Enables NBX system-to-NBX system VoIP calling between sites; includes 60-day trial NBX IP On-the-Fly License. Requires R4.1 or higher system software. One-port 60-day trial license Two-port license (unit-based)	 3C10270 3C10328
NBX VPIM Multisite Messaging Exchange License Lets NBX solutions exchange voice mails with third-party VPIM-enabled voicemail systems. Requires NBX R4.0 or higher system software. 60-day trial license Site license	 3C10276 3C10277

Ordering Information *(continued)*

PRODUCT DESCRIPTION	3COM SKU
NBX 3rd-Party Messaging License	
Can connect NBX and 3rd-party voicemail systems. Requires NBX R4.0 or higher system software and NBX WAV application ports.	
60-day trial license	3C10278
Site license	3C10279
NBX Media Driver License	
Supports seamless connections for TAPI/WAV applications to NBX solutions; eliminates need for T1/PRI card or analog connections between third-party application server and NBX. Requires NBX R4.1 or higher system software.	
60-day trial license (four-port license)	3C10318
One-port license (unit-based)	3C10319
Site License	3C10329
NBX pcXset License	
Puts the equivalent of an NBX business phone ("softphone") on the screen of a laptop or PC running Windows 98/NT/2000/XP; USB handset or headset not included; incremental or site licenses available. Requires R4.1 or higher system software.	
One-user license (unit-based)	3C10316
Site license	3C10154
Polycom Device License	
Allows a Polycom Soundstation IP 3000 to connect to an NBX solution; one license needed per Polycom unit. Requires R4.1 or higher system software. One-port license (unit-based).	3C10282
3Com Legacy Link for Norstar	
16-port gateway allows Nortel Norstar phones to connect to the NBX solution. Requires NBX R4.1 or higher system software.	
60-day trial license	3C10321
One-board (unit based)	3C10390
One-board license (unit based)	3C10283
3Com Legacy Link for Meridian	
16-port gateway allows Nortel Meridian phones to connect to the NBX solution. Requires NBX R4.1 or higher system software.	
60-day trial license	3C10321
One-board (unit based)	3C10391
One-board license (unit based)	3C10283
3Com Legacy Link—Analog	
16-port gateway allows analog phones to connect to the NBX solution. Requires NBX R4.2 or higher system software.	
One-board (unit based)	3C10392
One-board license (unit based)	3C10361
NBX Call Record and Monitor Licenses	
Enables third-party call recording and monitoring systems to connect to NBX solutions. Requires R4.1 or higher system software.	
Site license	3C10286
NBX ACD Licenses	
Increases capacity from built-in two ACD agents; must install 3C10440 before proceeding to N+1 agent pricing key code (3C10441). Requires R5.0 system software.	
Three-agent base upgrade package (for a total of five agents)	3C10440
One-agent license (for increasing from 6 to a maximum of199 agents)	3C10441
3Com ExecutiveAssistant Base Package	
Base package includes one Advanced Client License for speech recognition auto attendant and speech recognition company directory. Requires purchase of separate Windows-based server and NBX Media Driver port license.	3C10450
3Com eXchange Call Center Base Package	
Comprehensive voice routing and management system controls, monitors, and reports call center interactions, distribution, and handling activities; includes 10 inbound Voice Agents and one eXchange Visor-Supervisor. Requires purchase of separate Windows-based server and NBX Media Driver port licenses.	3C10380
3Com Education Module	
Software package specifically designed to assist K-12 schools includes auto dialer for absentee reporting, enhanced IVR for homework hotline, and 911 emergency call event notification with record-on-demand.	
Base package (supports an initial 500 students)	3C10510
Additional 250 students (beyond base package)	3C10511

Notes—When ordering, replace XX with the applicable suffix: AA = Australia, New Zealand; ME = Europe; SA = South Africa; UK = United Kingdom; US = Canada, Latin America, United States. See 3Com Voice Solution Global Price list for complete summary of SKU's and detailed compatibility matrix.

3com
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CELEBRATING 25 years of NETWORKING

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